INDEX

Prepared by Dr. G. F. SPRAGUE of the UNIVERSITY of NEBRASKA AGRICULTURAL SUBSTATION at North Platte, Nebraska. The work was done while Doctor SPRAGUE was a graduate student in CORNELL UNIVERSITY. Page numbers printed in black-faced type refer to headings of articles or of sections. Numbers in italics indicate references included in lists of "Literature cited."

ADACHI, BUNTARO 210
Adiantum cuneatum 533
Aegilops cylindrica 454, 455, 458, 460, 462, 463
Aegilops ovata 462
Albinism
  In guinea pig 247
  In maize 92, 315
  In mice 247
  In rabbits 247
  In rats 1
Aleurone 314, 316–319, 325, 326
ALEXANDER, W. 472, *475*
ALLARD, H. A. 266
Allelomorphism of color factors
  In guinea pigs 247
  In mice 1, 247
  In rabbits 247
  In rats 1
Allelomorphism of pericarp color factors in Maize
  Crosses involving mosaic types 448
  Crosses involving stable types 444
  Crosses involving variegation 446
  Description of colors 443
  Number of allelomorphs 451
  Tests for allelomorphism 444
ALLEN, C. E. 455, *463*, **530**, 532, 534, 573, *585*
ALTENBURG, EDGAR 360, *361*
Amblystegium serpens 532
AMERICAN ABERDEEN-ANGUS BREEDER'S ASSOCIATION 420
Amoeba
  bigenmma 130
  chaos 126
  communis 126
  diffluens 126
  discoides 126
  dubia 126
  nitida 126
  polypodia 139
  princeps 126, 127
  proteus 126, 127
  ramosa 126
  villosa 126
Amoebae
  Binucleate types 138, 141, **142**, 144, 145
  Divisions 139, 140, **142**, 150
  Granular type 126–130, 148
  Mononucleate type 137–139, 144, 148, 149
  Multiplication 131–133
  Polynucleate type **137–139**, **141**, 149
  Raptorial type 126, 128, 129, 130, 148
  Reproduction 124
  Tetranucleate type 141, 146, **148**, 149
  Trinucleate type 141, **146–148**
  Viability 131
  Variation in fission rates 134, 135, 136
ANDERSON, EDGAR **13**, 38
ANDERSON, E. G. 93, 94, *117*, 376, 378, **442**, 443, 451, *453*, 497, *511*
ANDERSSON, IRMA 533, *585*
Anthocyanin in maize 91
Antirrhinum
  Cross fertility in 17, 39
  Cross sterility in 16, 17, 39
  glutinosum 16
  hispanicum 16, 17, 38
  Ibanyezii 16
  majus 16
  molle 16
  siculum 16
  tortuosum 16
Arcella dentata 138
Associated factors (see linkage)
Autosomal genes, drosophila 54–56, 59–61, 68
Autosomes, drosophila 53, 54, 55, 56, 58, 60

BABCOCK, E. B. 219, *245*, 262, 263, *290*, 462, *463*
BAITSELL, G. A. 129, *150*
Balanced lethals 328
BALLY, W. 463
BARDELEBEN, KARL VON 211
BARFURTH, DIETRICH 207, 211
BARKER, E. E. 292, *304*
Barley (see also Hordeum)
  Genetic factors 155–158, 160, 163, 166, 170, 173, 175–177
  Glume width **174**, 175
  Linkage 159–171
  Multiple allelomorphs 155
  Spike density 160
BARRINGTON, A. 419, *427*
BATTS, J. McC. 206, *211*
BAUR, ERWIN 16, 38, *39*
BEAN, R. B. 209, *211*
BELLAMY, A. W. 513

Belling, J. 195, *196*, 455, 459, *463*, 533, *585*
Benjamin Earl W. *69*
Biasi, de B. 471, 472, *475*
Biffen, R. H. 156, 158, *179*
Bionomic study of teleosts 513
Blackburn, K. 459, *463*
Blakeslee, A. F. 181, 190, 194, 195, *196*, *197*, 459, *463*, 531, 532, 533, *585*
Blood groups
  Effect of diet on 471
  Effect of drugs on 470, 471
  Inheritance of 465
  In animals 472
  In human beings 467
Boedijn, K. 194, *197*
Bogert, van der, L. 589
Bombyx mori
  Egg colors in 479–485
  Egg shape in 479
  Voltinism in 479
  Yolk colors in 479
Bos bubalus 474
Botsford, E. F. 130, *150*
Bowlker, T. J. 420, 421, 427
Brassica pekinensis 20
Brem, W. V. 467, *475*
Bridges, Calvin B. 71, 83, *87*, 329, *342*, 343, 344, *361*, *362*, 395, *398*, 591
Brown, A. 471, *477*
Brown, Mabel 532
Buchanan, J. A. 468, 469, 472, *475*
Buchholz, J. T. 194, *197*, 533, *585*
Budge, C. H. *475*
Burgeff, H. 531, *585*
Bursa grandiflora 20, 38
Bussey Institution 454, 473
Byron, W. C. 471, *476*

Cabrera, C. 466, *475*
Cady, Lee D. *211*
Calculation of
  Correlation coefficients 369
  Crossover percentages from a single visible crossover class 252–255
  Crossover values in maize 94
  Incidence of failures 207
  Index of symmetry 204
  Probable error 94, 153, 154
California University of 282
Campbell, D. H. 536, *585*
Campbell, M. H. 419
Cardamine pratensis 38
Carter, L. A. 126, 127, *150*
Cash, J. 126, *150*
Castle, W. E. 1, 3, 4, *12*, 94, 109, 115, 116, 250, 253, 258, *260*, 306, 421, *427*, 489, 490, *492*, 497
Cattle
  Coat color in 419, 427
  Galloway 427
  Guernsey 421–423, 427
  Holstein 421–423, 427
Cherry, T. H. 471, 472, *475*
Chlorophyll characters in maize 91, 305
Chromosome behavior in a genus cross 454
  Chromosome numbers of functional gametes 461
  Equational division of univalents 455
  Lagging of univalents 455
  Number of bivalents and univalents at first metaphase 455
  Pairing of chromosome sets in wheat 460
  Sterility of F_1 hybrid 460
Chromosome map of maize 103
Chromosome numbers
  Aegilops 455, 459
  Nicotiana 261
  Triticum 455, 459
Chromosome theory 6
Chromosomes in Drosophila 49-58, 61–63, 70, 71, 84, 85
Cichorium Intybus 18, 19
  Self fertility in 18, 19
  Self sterility in 18, 19
Clark, J. A. 216, *246*
Clausen, R. E. 152–155, 159, **181**, 183, *197*, 219, *245*, 261, 284, 288, *291*
Clemente, L. S. 247
Coca, A. F. 466, 469, *475*
Cohen, R. H. 292, *304*
Cole, L. J. 94, 420, *428*, 497
Collin, M. H. 173, *179*
Collins, E. J. 532, *585*
Collins, G. N. 153, *179*
Collins, J. L. 179, 285, *290*, 457, 460, 462, *463*, *464*
Columbia University 330
Complementary factors
  For chlorophyll in maize 305
  In rats 2
Compton, R. H. 38, *39*
Cook, O. F. 212, *245*
Cornell University 94, 109, 497
Corolla color and flower size in Nicotiana 275–277
Correlations in normal and alcoholic rats 368
  Body length on tail length 369
  Body weight on body length 369
  Body weight on tail length 369
Correns, C. 17, 18, 38, *39*, 374, *399*, 532, 533, *585*
Coupling 1, 107, 120
Crepis 262, 286
Crepis biennis 459, 460
Crepis capillaris 457
Crepis setosa 457, 459, 460
Crew, F. A. E. 529
Cross fertility in
  Antirrhinum 17, 18
  Nicotiana 17, 18, 36
Crossing over, influenced by
  Age of parent (rats) 6–11
  Size of litter (rats) 7
  Temperature (Drosophila) 588
  Temperature (rats) 6
  X-rays (Drosophila) 70, 89, 588
Crossover modifiers in Drosophila 327
Crossover percentages

Crossover percentages (continued)
In barley 159, 160, 166, 170, 171, 176, 177
In maize 100, 101, 104–107, 111–115, 311, 312, 315, 316, 507, 508
In mice and rats
albinism—pink eye 3, 489
albinism—red eye 5
albinism and red-eyed yellow 3, 4
dilution—dark eye 247
pink eye—ruby eye 489, 490
red-eyed yellow-pink-eyed yellow 3
Crossover ratios 3–12
Cross sterility in
Antirrhinum 17, 39
Nicotiana **13,** 21, 24, 34, 39
Verbascum 18
Veronica 17, 18, 39
CUÉNOT, L. 214, 533, *585*
CUTLER, G. H. 215, 216, *245*

DANFORTH, C. H. *199*, 206
DANGEARD, P. A. 531, *585*
Datura 190
Stramonium 194
Pollen tube growth in 194
DAVENPORT, C. B. 197
DECASTELLO, A. 465, *475*
DEMEREC, M. 320, *321*, 533
DETLEFSEN, J. A. **247,** *260*, 487, *492*
DIEBERT, O. 466, *475*
DIEMER, T. 471, *475*
DIGBY, L. 459, *464*
DONALDSON, H. H. 365, *367*
DOUIN, C. 532, 554, *585*, *586*
DOUIN, R. 554, *586*
DOURIS, R. 475
Drosophila 6, 151
melanogaster **41,** 43, **70,** 285
Crossover modifiers 327
Effect of age of female on linkage 588
Effect of temperature on linkage 588, 605
Effect of X-rays on linkage **70,** 85, 86, **588,**
Egg size 41, 43–45
Genetic characters in Drosophila
Abrupt 44–57, 59, 61–68
Apricot 44, 45
Aristaless 44
Bar 44, 45, 47–49, 58–61, 64, 67, 68
Beaded 329
Black 70–77, 79–81, 83, 87–89, 597
Cardinal 44, 56, 57, 63
Cream 44
Crossover modifiers **327,** 328
Curly 44, 61, 330
Curved 70–72, 74–84, 87–89, 589
Dichaete 44, 61, 62
Eosin 70, 340
Eyeless 44, 56, 57, 63
Facet 44
Florida wild 44
Hairy 327–330, 333
Hereditary tumors in Drosophila 343
Ivory 44
Kidney 327

Drosphila (continued)
melanogaster (continued)
Genetic characters in Drosophila (continued)
Lance 327, 331
Linkage 331
Lobe 44, 61
Miniature 70, 340
Morula 44
Oblique 44
Purple, 44, 56, 57, 63, 70–84, 87–89, 589
Rough 327
Roughoid 328, 330
Ruby 44, 47, 64, 65, 67
Sepia 327
Shaven 44
Sooty 44, 327, 329
Spineless 327
Spread 329
Vestigial 44
White 44
Wild 44, 46, 52
Xple 44
simulans 285
Drugs, effects on blood groups 470
DUCK, R. W. 420, *428*
DUNCAN, P. M. *150*
DUNGERN, E. VON 466, 470, 472, *475*
DUNN, L. C. 3, *12*, 250, 253, 254, 256, 258, **259,** 260, 490, *492*
Dwarfness in wheat 212
Progeny from dwarf plants 221, 226
Progeny from normal plants 218
DYKE, S. C. 466, *475*

EAST, E. M. 15, 16, 18, 20, 21, 24, 30, 38, *39*, 66, *69*, 94, *117*, 213, *246*, 261, 263, 272, 284, 285, 287, *290*, 375, *399*
EDEN, R. 471, *476*
EDGERTON, C. W. 531, *586*
EDWARDS, J. G. 124
Egg size in Drosophila **41,** 42, 43, 44, 45, 56
Description of 43
Effect of environment on 46, 47, 56
Effect of females on 41, 42, 45
Effect of male on 42
Methods of study 42, 43
Variation in 43, 44
EHRNROOTH, E. 474, *477*
ELDERTON, W. P. 94, *117*, 152, *179*
EMERSON, R. A. 4, 91–94, 115, 116, *117*, 153, *179*, 213, 214, *246*, 317, *321*, 374, 375, 376, 378, 379, 396, *399*, 442, 443, 451, 452, *453*, *512*
EMERSON, S. H. 213, *246*
ENGLEDOW, F. L. 155, 157, *180*
Enlarged
Description of **181,** 182
Gametic ratios of 189
Origin of 183
Self fertilization of 188
Transmission through pollen 189
Trisomic character **181,** 183, 187, 188, 189, 196
EPSTEIN, L. 467, *477*

ERNST, A. 531, *586*
Eschscholtzia californica 19
ESSENBERG, J. M. *529*
EVVARD, J. M. 419, *428*
EYSTER, W. H. **372**

FARMER, J. B. 459, *464*
FARRER, WM. 215, 242, *246*
FEDERLEV, H. 479, *485*
FELDMAN, H. W. 248, *260*, **487**, 488, 492
FISHBEIN, M. 472, *476*
FLEISCHER, M. 532, *586*
FRIEDMAN, S. S. 473, *477*
FROST, H. B. 293, *304*
FRUWIRTH, C. 175, *180*
Funaria hygrometrica 532
Functional sterility in Verbascum 18

Gametophytic inheritance in Sphaerocarps 530
  Characteristics of typical female clone 534
  Characteristics of typical male clone 541
  Characteristics of tufted female clone 544
  Characteristics of tufted male clone 551
  Frequency of tufted races 553
  Interclonal inheritance of tufted 554
GÄRTNER, C. F. VON Frontispiece
GAY, F. P. 466, *476*
GEERTS, J. M. 533, *586*
Gene elements 379, 394
GENERAL ELECTRIC COMPANY 589
GICHNER, M. G. 467, 469, *476*
GIRAUD, G. 470, *476*
GOODSPEED, T.H. **181**, 183, *197*, 284, 285, 288, *290*, *291*
GRAY, ASA 266, *291*
GREGORY, R. P. 375, *399*
GRUBER, WENZEL 211
GUTHRIE, C. G. 469, *476*

HALDANE, J. B. S. 94, 97, *117*, 152, 153, 154, *180*, 251, *260*
HANDY, V. 363, 368, *371*
HANSON, F. B. **363**, **368**, *371*
HAPP, W. M. 471, *476*
HARLAN, H. V. 155, 166, 177, *180*
HARPER, J. 471, *476*
HARRIS, J. ARTHUR *117*
HARRISON, J. W. H. 459, *463*
HARTLEY, C. P. 374, *399*
HARVARD UNIVERSITY 94
HAYES, H. K. 94, *117*, 155, 163, *180*, 213, *246*, 263, 284, 285, 287, *290*, 375, *399*, 443, **448**, **452**, *453*
HAYNES, CAROLINE C. 554, *586*
HEGI, GUSTAV 293, *304*
HEGNER, R. W. 138, *150*
HEKTOEN, L. 466, 472, *476*
HEMSLEY, W. BOTTLING 272, *291*
HENDERSON, D. L. 466, *477*
Hereditary tumors in Drosophila 343
  Description of 345
  Heredity of 352
  Influence of environment on 358
HERIBERT-NILSSON, N. 533, *586*
Hesperis matronalis 373
Heterandria formosa 514
HEYS, FLORENCE 368
HIGLEY, E. T. 472, *475*
HIRSCHFELD, D. L. 466, 470, *475*
HIRSCHFELD, H. 466, 470, *476*
HIRSCHFELD, L. 466, 470, *476*
HOGE, MILDRED, A. 360, *362*
HOOKER, S. B. 476
HOPKINSON, J. 126, *150*
HOR, K. S. **151**, 177, *180*
Hordeum (see also barley)
  deficiens 155, 156
  distichon 155, 156
  intermedium 155
  Species hybrids 268
  vulgare 155, 156
HUBBARD, J. E. 473, *477*
HUCK, J. G. 469, 471, *476*
HUESTES, R. R. 205, *211*
HUTCHISON, C. B. 151, *180*
Hyperdactyly 207

ILLINOIS, UNIVERSITY OF 421, 427
IMAI, Y. 152, 160, 178, *180*
INGEBRIGSTEIN, R. 472, 473, *476*
Inheritance
  Gametophytic in Sphaerocarpos 530
  In barley 151
  In mice 1, 247, **487**
  In Nicotiana 266
  In radishes 292
  In rats 1, 487
  Maternal in *Bombyx mori* 479
  Of anthocyanin seedling characters in maize 91
  Of blood groups 465
  Of chlorophyll seedling characters in maize 91, 305, 493
  Of coat colors in cattle 419
  Of crossover modifiers in *Drosophila mleanogaster* 327
  Of dwarfness in wheat 212
  Of egg size in Drosophila 41
  Of pericarp colors in maize 442
  Of self sterility 13
  Of trisomec "enlarged" in Nicotiana 181
  Of tumors in Drosophila 343
  Of unilateral variations in man 199
  Of variegation in maize 372
Inter-fertility, intra-sterility in
  Antirrhinum 17
  Bursa 20
  Linaria 17, 18
  Nicotiana 13, 24–26, 34, 37
  Veronica 17
Interspecific hybrids in Nicotiana 189

JANSKY, JAN. 466, 468, *476*
JENNINGS. H. S. 125
JERVELL, F. 466, 469, *476*
JOHANNSON, E. W. 219, 466, *476*
JOHNS HOPKINS UNIVERSITY 124
JOHNSON, JAMES 266

JOHNSTON, E. 477
JONES, B. B. 471, *476*
JONES, D. F. 405, *418*
JONES, S. V. H. 420, *428*
JONSSON, ST. 466, *476*

KALISKY D. J. 473, *477*
KELANEY, M. A. 281
KEMPTON, J. H. 100, 101, *117*, 213, *246*, 311, 317, *322*, 496, *512*
KEYNES, G. 466, 469, *476*
KIHARA, H. 459, *464*
KING, HELEN D. 365, 366, *367*, 487, 488, *492*
KLEIN, H. 469, *475*
KNIEP, H. 531, *586*
KOLMER, J. A. 474, *476*
KUIPER, K. 420, *428*

LAMBERT, R. A. 137, *150*
LANDSTEINER, K. 465, 467, *476*
LANGROCK, E. G. 471, 472, *475*
LATTES, L. 469, *476*
LEARMONTH, J. R. 466, 468, *476*
Lebestes reticulatus 514
LEDOUBLE, A. F *211*
LEHMANN, ERNST 17, 38, *39*
LEIDY, J. 126, *150*
LEVINE, E. C. 470, *477*
LEVY, JOSEPH 124
LEWIS, J. H. 466, *477*
LEWIS, W. H. 138, *150*
Linaria vulgaris 17, 18, 38
  Fertility and sterility in 17, 18
LINDSTROM, E. W. 91, 92, 94, 101, 106, 109, 112, 113, 114, *117*, 262, 268, *291*, 305, 306, 317, *322*, 495, 496, 497, *512*
Linear, order of genes 6
Linkage
  Coupling phase 1, 107, 120
  In barley 160, 171–173
  In maize 311, 312, 315, 316, 507, 508
  In mice 3, 5, 250, 258, 259
  In rats 3, 5, 7
  Methods of calculating 154
  Repulsion phase 1, 107, 121
Linum grandiflorum 20
LIPSCHUTZ, BENJAMIN 209, *211*
LIU, J. H. 466, *477*
LLOYD-JONES, O. 419, *428*
LOVE, H. H. 408, *418*
LUSH, J. L. 497

MACDOWELL, E. C. *69*, 473, 474, *477*
Maize 91, 151, 262
  Attainment of homozygosity in 405, 407, 409
  Chlorophyll characters in 92, 493
  Chromosome map of 103
  Defective seeds in 410, 411, 412
  Genetic factors 92–98, 100–104, 106–120, 122, 311, 312, 315–319, 496, 497, 504, 505, 507
  Heterozygosity in 405, 407
  Linkage in 104–107, 111–115, 311, 312, 315, 316, 507, 508
  Mutations in inbred strains of 410
Maize (continued)
  Pericarp color in 372, 378, 442
  Seedling characters in 91, 497, 500, 508
  Variegation in 372
MALLOCH, F. W. 261
MALLOCH, JAMES 263
MALLOCH, W. S. 261, 262, 268, 281, *291*
MALTANER, F. 477
Man, unilateral variation 199
  Causal factors of 205
  Factors studied in
    Axillary arch present 201
    Biceps muscle with three heads 201
    Carotid artery with "candelabra" division 201
    External tibiale element present 201
    Flexor collicis longus muscle lacking 201
    Infraorbital canal subdivided 201
    Malar bone partially subdivided 201
    Medial infraorbital canal present 201
    Obturator artery arising from epigastric 201
    Os centrale carpi lacking 201
    Palate bone articulating with frontal 201
    Palmaris longus muscle suppressed 201
    Peroneus tertius muscle absent 201
    Piriformis muscle divided 201
    Plantaris muscle absent 201
    Psoas minor muscle present 201
    Quadratus femoris muscle absent 201
    Sesamoid bone in peroneus tendon 201
    Sternalis muscle present 201
    Superacondylar process of humerus present 201
  Frequency of 199
  Heredity of 199
  Influence of sex on 209
  Influence of two side on 209
  Non-appearance of expected traits 206
  Relation of unilateral to bilateral appearance of trait 202
MANN, M. C. 285, *290*, 457, 460, 462, *464*
MARCHAL, ÉLIE 532, *586*
MARCHAL, ÉMILE 532, *586*
Marchantia polymorpha 532
MARX, H. 474, *477*
MASSACHUSETTS ANTITOXIN AND VACCINE LABORATORY 473
Maternal inheritance 479
  In *Bombyx mori* 479
MATSUMOTO, M. 474, *476*
MAVOR, J. W. 70, *87*, 588, 589, 591, 592, 605, *608*
MCALLISTER, F. 532, *586*
MCCONNEL, S. 466, *478*
MCQUARRIE, I. 471, *477*
MEEK, S. E. 529
MEISTER, G. 243, *246*
MEYER, K. 471, *477*
Mice
  Genetic factors 248, 249, 252
  Higher rate of crossing over in female 6
  Linkage in 250, 258, 259
  Prenatal elimination in 250
MINO, P. 471, *477*

Mirabilis Jalapa 374
MIYAKE, K. 152, 160, 178, *180*
MIYAZAWA, B. 214, 219, *246*
MOORE, DOROTHY 16
MORGAN, T. H. 68, 69, 71, *87*, 262, 329, *342*, 344, *362*
MOSS, W. L. 466, *477*
MULLER, H. J. 71, 329, *342*, 360, *361*, 394, *399*
Multiple allelomorphs
  In barley 151
  In guinea pigs 247
  In maize 442
Mus norvegicus 1

NAKANO, TATOSO 211
NEETHLING, J. H. 215, *246*
NEWELL, W. 533, *586*
Nicotiana
  alata 13–15, 20, 22, 24, 31, 36–39, 264, 265
  alata var. *grandiflora* 13, 15, 24
  auriculata 183
  auriculata×*macrophylla* 183
  Bigelovii 263–265
  Bigelovii×*longiflora* 264
  Bigelovii×*Sanderae* 264
  Chromosome numbers in 261
  commutata 38
  Corolla color and flower size in 275-277
  Forgetiana 13–15, 20–22, 24, 36–38
  Genetic factors 269, 270
  glauca 261, 266
  glutinosa 38
  Langsdorffi 263, 264, 270
  longiflora **261,** 263–265, **268,** 279
  longiflora×*Sanderae* 264
  longiflora×*sylvestris* 264
  longiflora×*Tabacum* 264
  macrophylla 183
  Method of determining cross sterility 14–16
  multivalvis 266
  paniculata 261
  Periodicity of reduced flowers 279, 281–283
  persica 263, 264
  persica×*Langsdorffii* 264
  persica×*Tabacum* 264
  Pollen-tube growth 14, 34, 195
  Pseudo-fertility 23, 38
  quadrivalvis 266
  Reaction systems 261, 262
  rustica 261, 263
  rustica×*Langsdorffii* 264
  rustica×*Tabacum* 264
  Sanderae 15, **261,** 264, 265, **268**–272
  Species hybrids 261
  Sterility 13, 30, 34
  sylvestris 189, 190, 192, 261–265
  sylvestris×*alata* 264
  sylvestris×*Sanderae* 265
  Tabacum **181,** 189, 194, 196, **261**–268
  Tabacum×*alata* 265
  Tabacum×*longiflora* 265
  Tabacum×*Sanderae* 265
  Tabacum Var. *angustifolia* 183
  Tabacum Var. *auriculata* 183, 184, 187
Nicotiana (continued)
  Tabacum Var. *havanensis* 278
  Tabacum Var *macrophylla* 183, 184, 187
  Variation in flower color 15
NILSSON-EHLE, H. 152, 179, *180*
Oenothera Lamarckiana 194, 533
OTTENBERG, R. 467, 473, *477*

PANNISSET, L. 473, *477*
Paramecium 130
PARK, J. B. 16, 21, 24, 30, 38, *39*, 272, *290*
PARNELL, F. R. 533, *586*
PASCHER, A. 531, *586*
PATTERSON, H. A. 474, *478*
PAYNE, F. **327,** *342*
PEARSON, KARL *117*, 152, *180*, 419, *427*
PÉNARD, EUGÈNE 126, *150*
PERCIVAL, J. 454, 461, *464*
PEYTON, S. M. 471, *476*
PFEIFFER, H. 474, *477*
PFITZNER, W. *211*
Phycomyces nitens 531
PICHLER, KARL *211*
PIRIE, J. H. 466, *477*
PLANT STUDY COMPANY 535
Platypoecilus maculatus 514, 515, 519, 522, 523
  Color patterns of 522
  Diagnostic characters of 519
  Secondary sex characters of 523
PLOUGH, H. H. 70, 71, 86, *87*, 588, 591, 592, 605, 607, *608*
Poecilia vivipara 514
Pollen-tube growth
  In Datura 194
  In Nicotiana 14, 34, 195
Polypodium aureum 457
Polypodium vulgare var. *elegantissimum* 457
POPE, M. N. 177, *180*
Prenatal elimination in mice 250
Probable error formula 219
PRZESMYCKI, F. 473, *477*
Pseudo fertility in
  Antirrhinum 38
  Bursa 20, 38
  Cardamine 38
  Chicorium 19
  Eschscholtzia 19
  Linaria 38
  Nicotiana 23, 38
  Reseda 38
  Veronica 17, 18, 38
PUNNETT, R. C. 375, *399*

Radish
  Genetic factors 296, 301
  Insect visitors of 293
  Method of breeding 293
Random sampling as an explanation of cross over fluctuations 12
Raphanus Raphanistrum 292
  Inheritance of length of foliage 296, 298
  Inheritance of root color 295, 296
  Inheritance of root form 300
Raphanus sativus 20

Ratios as an indication of evolutionary origin 319
Rats
  Albino allelomorphs 487
  Genetic factors
    Albino 1–6, 9–11
    Pink-eyed yellow 1, 3–6, 9–11
    Red-eyed yellow 1–6
Variation in linkage in 5, 7
Reaction systems in Nicotiana 261, 262
REGAN, C. TATE *529*
RENNER, O. 533, *586*
Repulsion (see also linkage) 1, 107, 121
Reseda odorata 38
  Pseudo-fertility in 38
Riccia Curtisii 532
RICHARDSON, A. E. V. 215, 242, *246*
RICKER, P. L. 266, 272, *291*
RICKETT, H. W. 535, 536, 538, 555, *586*
RIDGWAY, R. *291*
RISHBIETH, H. 208, *211*
ROBERTS, E. *342*
ROBERTSON, B. 471, *477*
ROBERTSON, T. B. 130, *150*
ROHDENBERG, G. L. 473, *477*
ROSENBERG, O. 459, *464*
ROYAL BOTANIC GARDEN 263

SACHS-SKALINSKA, MARIE 274, *291*
SANDER AND SONS 15
SAX, H. J. 454
SAX, KARL 216, *246*, **454**, 455, 459, 460, *464*
SCHACKE, MARTHA A. *586*
SCHAEFFER, A. A. 125–127, 130, 148, *150*
SCHIEMANN, E. 175, *180*
SCHULTZE, O. 532, *586*
SCHULZE, F. E. 139, *150*
SCHÜTZE, H. *477*
SCHWALBE, G. *211*
SCHWEIZER, J. 532, *586*
Seasonal differences in rats in
  Birth weight 366
  Litter size 366
  Sex ratios 364
Secale cereale 462
SEGALL, H. N. 470, *477*
Selection for egg size in Drosophila 65, 67
Self fertility in Chicorium 18
Self sterility due to
  Environmental factors 15
  Germinal factors 15
Self sterility in
  Antirrhinum 16
  Brassica 20
  Chicorium 18
  Linaria 17, 18
  Linum 20
  Nicotiana 13, 30, 34
  Raphanus 20
  Veronica 17
SETCHELL, W. A. 183, *197*, 266, 272, *291*
Sex
  Frequency of crossing over as influenced by
    in mice 5
    in rats 5
Sex (continued)
  Secondary characters in teleosts 523
Sex linked genes 51, 53–55, 67, 68
Sex ratios in teleosts 527
SHATTOCK, S. G. 465, *477*
SHAWAN, H. K. 465, *477*
SHOLES, F. N. 363
SHULL, G. H. 20, 38, *39*, 409, *418*
Silk moths 6, 479
SIMPSON, R. 471, *477*
SIRKS, M. J. 18, 19, *39*
SNYDER, L. H. **465**, 473, *477*
Species crosses in
  Hordeum 268
  Nicotiana **261**, 264, 265
Sphaerocarpos Donnellii 532, 534, 535, **544**, 553, 573, 584
  Gametophytic inheritance in 530
Sphaerocarpos Michelii 532
Sphaerocarpos texanus 532
STANTON, T. R. 216, 242, *246*
STARK, MARY B. 343, 360, *362*
Sterility, see also self sterility and cross sterility
  In wheat hybrids 460, 461, 463
STOLC, A. 125, *127*, 138, 144, 149, *150*
STOTSENBURG, J. M. 365–*367*
STOUT, A. B. 18, 19, *39*, *40*
STROMAN, G. N. **91**, 311, *322*, **493**, *512*
STUDENT 408, *418*
STURLI, A. 466, *475*
STURTEVANT, A. H. 68, 69, 285, *291*, 329, *342*
SUMNER, F. B. 205, *211*
SVENSON, H. K. 70, 588

TÄCKHOLM, G. 459, *464*
TANAKA, Y. **479**, *480*
TAYLOR, MONICA 143, *150*
TEBBUT, A. H. 466, 469, *478*
Technique in
  Barley inheritance studies 152, 153
  Classification in maize seedlings 98
  Classification of trisomic in Nicotiana 181, 182
  Comparing seasonal differences in rats 363–366
  Culturing amoeba 131
  Making chromosome counts in wheat 455
  Measurement of egg size in Drosophila 42, 43
  Mice inheritance studies 249, 258
  Note taking in maize 94
  Pollination of Nicotiana 14–16
  Pollination of radish 293
  Producing culture media for amoeba 125
  Rearing teleosts 515–519
  Studying tumors of Drosophila 347, 350
  Studying variegation 376
  Taking blood samples for iso-agglutinins 473
  Treating Drosophila with heat 588, 589
  Treating Drosophila with X-rays 71, 588, 589
Teleosts, bionomic study of 513
TEMPLETON, G. S. 420, *428*
TERAO, H. 479, *485*
TERRY, R. J. 208, *211*
Tetrasomic inheritance 194

Of super enlarged 194–196
TEXAS AGRICULTURAL EXPERIMENT STATION 497
THALHIMER, W. 473, *477*
THOMPSON, J. W. 206, *211*
TOYAMA, K. 479–482, 485, *486*
TRANSEAU, E. N. 531, *587*
Trisomic inheritance 181
Of enlarged 181, 183, 187–189, 196
TRIST, M. E. 474, *476*
Triticum (see also wheat)
Triticum
durum 215, 243, 459, 460
monococcum 243
polonicum 459
Spelta 454
turgidum 215
vulgare 216, 243, 4 4, 459–463
TROUARD, RIOLLE, Y. 173–*179*, 292, *304*
TSCHERMAK, E. VON 175, *180*

UBISCH, G. VON 152, 157, 160, 177, 178, *180*, 533, *587*
UDA, H. 481–483, 485, *486*
UNGER, L. J. 467, 471, *478*
UNITED STATES DEPARTMENT OF AGRICULTURE 266
UPHOF, J. C. TH. 292

Variegation 372
Analysis of 372
Frequency of variegation changes 388–391
Inheritance of variegation patterns 385, 387
Nature of variegation 397
Relation of color intensity to rate and direction of color change
Orange to light orange 383
Orange to red 382
Orange to variegation 383
Stability of colorless pericarp 392
Varieties of wheat 216, 454
Verbascum phoenicium 18, 19
Functional sterility in 18
VERGE, J. 473, *477*
Veronica syriaca 17, 38, 39
Cross sterility in 17, 38, 39
Inter fertility in 17
Pseudo-fertility in 17, 18, 38
VERZÀR, F. 466, *478*
Viability in Drosophila 82–84
VILMORIN, PH. DE. 214, *246*
Volvox proteus 126
VORSCHÜTZ, J. 471, *478*
VRIES, DE, HUGO 17, 18, 38, *40*, 194, *197*, 373, *399*

WACHTER, W. L. **1**, 489, 490, *492*
WADE, H. W. 466, *475*
WALDRON, L. R. **212**, 216, *246*
WALSH, L. S. N. 474, *478*
WANG, H. S. 466, *477*
WARBURTON, C. W. 215, 216, 242, 244, *246*
WARD, L. 330, *342*
WARREN, DON. C. 41
WASHINGTON STATE COLLEGE 454
WATANABE, K. 480, *486*
WATSON, FROOME, T. 263
WATT, G. 533, *587*
WEBSTER, L. T. 138, *150*
WELDON, W. F. R. 428
WESZECZKY, O. 473, 474, *478*
WETTSTEIN, F. VON 533, *587*
Wheat (see also Triticum)
Chromosome numbers in 455
Division of chromosomes in the heterotypic stage 457
Dwarfness in 212
Genus cross in 454 455
Lagging of univalents in F_1 455
Paired chromsomes in 455
Sterility in hybrids 460, 461
WHITING, P. W. 487, 488, *492*, 534, *587*
WILLIAMS, H. U. 474, *478*
WILSON, I. T 343
WILSON, M. 532, *587*
WISCONSIN, UNIVERSITY OF 94, 497
WOODRUFF, L. L. 129, 130, *150*
WRIGHT, S. 247, *260*

X chromosome—Drosophila 49, 50, 53, 54, 55, 70
Xiphophorus helleri 514, 515, 519, 522, 523
Color patterns of 522
Diagnostic characters of 519
Secondary sex characters of 523
X-ray and temperature effects in Drosophila on 588
Comparative viability of cross overs 594, 599
Crossing over 590, 596, 603
Duration of effects 606
Fertility 590, 596, 603, 607
Sex ratios 590, 596, 603
Time of appearance of effects 605

YULE, G. UDNY *291*

ZEA (see maize)
Zea ramosa 100
Zea tunicata 100
ZIMMERMAN, R. *478*
ZIMMERMANN, W. 531, *587*
ZISKOVEN, H. 471, *477*